

COLLISION AVOIDANCE SYSTEM (Reissue) Serial # 09/892,185 GAU 3661 Examiner Eric M. Gibson
Applicant Brett O. Hall 4208 Lazy Creek Dr. Marietta, GA 30066 770-517-6135; Responsive to 4/22/03 OA

INTERVIEW SUMMARY

A telephone interview occurred on April 17, 2003. The Examiner explained that his process to determine whether claims 23 and 24 avoid recapture is to compare their elements with claim 1. The Examiner said that claims 23 and 24 do not avoid recapture because his comparison indicates that they do not include trigger sensors and claim 24 does not contain assessing the likelihood of collision limitation.

The Applicant expressed his view that claims 23 and 24 were already sufficiently limited in a manner that made them within the scope of the present invention and that the inclusion of the trigger sensors was excessive. The Applicant mentioned that the claims as they were are unique over prior art. The Examiner stated that prior art was not an issue pertaining to claims 23 and 24.

The Examiner stated that the use of trigger sensors for vehicle detection were not an element that made the invention allowable over prior art. The Examiner also said that claims 23 and 24 were broader than claim 1 in some respects but narrower than claim 1 in others.

The Examiner indicated that the Applicant (at his discretion) could configure or define trigger sensors in multiple ways (including incorporation with the traffic control means).

The Examiner said that claims 23 and 24 would be acceptable if they were shown to be a modification of the original system. He suggested that the fastest and easiest way for this to be done is to make them dependent on claim 1. The Examiner and Applicant did not come to a final agreement regarding claims 23 and 24.

REMARKS

The reasons for the recapture rejection remain unclear. The Applicant still seeks an explanation of the specific subject matter that the Examiner says has been surrendered.

Claims 23 and 24 have been modified to coincide with the enclosed remarks.

The Examiner has cited a recapture rejection against claims 23 and 24 based on his belief that they present subject matter not presented in the original application. In his efforts to ensure that recapture is avoided, the Examiner is believed to be indiscriminately following a check list of elements from claims 1 and 16 and forcing them upon claims 23 and 24 without considering whether the overall goal of recapture is avoided at a point before the forced inclusion of every element from claims 1 or 16. The Applicant is entitled to the broadest claims possible that avoids recapture and not just the most restrictive claims that avoids recapture.

Two arguments are presented in support of claims 23 and 24. Argument 1 demonstrates how claims 23 and 24 are based on subject matter presented and allowed in the original application and as such they avoid the Examiner's basis for the recapture rejection. Argument 2 shows that claims 23 and 24 are already bounded by the limitations that have been previously allowed and indicated by the Examiner to make the invention patentably distinct over prior art.

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ARGUMENT 1

Subject Matter Content Present In Original Application

On page 2 of the Office Action dated 4/22/03, the Examiner cites a recapture rejection based on, "*A broadening aspect is present in the reissue which was not present in the application for patent.*" A review of claims 1c and 16c of the original application shows that an independent factor governing the controller's action is the local traffic laws. Local traffic laws include the rules that motorists are expected to follow in a traffic environment / situation in order to facilitate the safe movement of vehicles with other vehicles, pedestrians, or trains.

The Applicant has been consistent since the original application in stating that the invention reacts according to the local traffic laws. This means that system action in collision prevention is executed according to the rules of the road that govern whether a vehicle should be slowed, stopped or allowed to proceed without interruption. Therefore any claim that fulfills this invention concept is in keeping with what the Applicant has consistently stated since the original application for patent. The Examiner has not cited prior art rejections against this concept.

Claims 23 and 24 are directly related to said portion of original claims 1c and 16c. Claims 23 and 24 do not expand subject matter beyond the original application into a region of recapture but instead expounds subject matter that was both present in the original application and already allowed. That specific subject matter is that the system executes collision prevention "***based on local traffic laws***". The link between the local traffic laws and the traffic control means is established in the following paragraph.

Link Between Local Traffic Laws and Traffic Control Means

This section demonstrates the link between the local traffic laws and the traffic control means (and its status). Consider the following example. If a traffic law enforcement officer observes that a motorist fails to operate his vehicle in adherence to the red light (i.e. non-permissive status) of a traffic light, then the officer will issue a traffic ticket to the motorist. The traffic ticket and traffic court proceedings will clearly indicate that the motorist is charged with a violation of the law(s) or rules specific to the motorist's failure to comply with the non-permissive status of the traffic light. Conversely, the operation of a vehicle through an intersection as directed by a green light (permissive status) is compliant with traffic laws / rules. Thus the status of traffic control means is synonymous with the local traffic laws / rules. For the purpose of claims structure, the traffic control means and its status is a tangible representation of the traffic laws / rules.

The Applicant has never surrendered the subject matter that the invention executes according to the local traffic laws. No prior art has been cited against the invention in relation to this subject matter. The Applicant has not had to modify claims to overcome prior art for this subject matter. This subject matter was present in the original application for patent. Thus the Applicant has shown that claims 23 and 24 are founded on the subject matter present in the original application and therefore the recapture rejection is not applicable.

The Applicant submits that Argument 1 alone is sufficient to overcome the recapture rejection and allow claims 23 and 24. However, the Applicant also submits Argument 2 to further justify the allowability of claims 23 and 24.

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ARGUMENT 2

The difference in view points between the Examiner and the Applicant regarding claims 23 and 24 is whether these reissue claims must contain all of the limitations of the broadest claim(s) in the application (1 and 16). Specifically, the Examiner's position has been to insist on the inclusion of the trigger sensors. Claims 23 and 24 are already sufficiently bounded in a way that defines the claims within the same scope of the allowed claims, which have already been determined to avoid recapture. Again, the Applicant emphasizes that the broadest claims that avoid recapture should be allowed and not just the most restrictive claims that avoid recapture.

Must Every Reissue Claim Contain All Limitations?

Section MPEP 1412.02 contains the section entitled, "**REISSUE CLAIMS ARE BROADER IN SCOPE IN SOME ASPECTS, BUT NARROWER IN OTHERS:**" How can a new reissue claim EVER be broader in some aspects if it must contain all of the restrictions of the original claims? The title alone indicates that there is a broadening allowed with reissue claims that goes beyond the previously allowed claims. The section content explains that new claims do not have to be bounded by all of the exact same limitations, but instead be only bounded by the necessary limitations. The question then becomes "What are the necessary limitations to avoid recapture?"

The Necessary Limitations

The purpose of the recapture rule is to prevent the reinstatement of patent content that had to be surrendered in order to get the original patent allowed. Thus any subject matter not related to this criteria should not be barred by recapture.

At the recommendation of the Examiner, the Applicant has previously consulted with Mr. Randy Reese, a Special Programs Examiner with expert knowledge of reissue applications. During such a consultation with Mr. Reese, he stated that new reissue claims need only include the limitations that the Examiner has stated made the invention patentably distinct over prior art.

Limitations previously cited by the Examiner as having patent distinction are the only necessary limitations. Indeed it was only the framing of the invention by those limitations that allowed the Examiner to issue the original patent in the first place or allowed other reissue claims. This is further substantiated by the MPEP statement, "**... if the reissue claims is narrower in an aspect germane to [a] prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim...**"

The Broadened Subject Matter Does Not Relate To A Prior Art Rejection

- Excluding trigger sensors or sensing from claims 23 and 24 is a broadening that does not relate to any prior art rejection.
- As stated in the Interview Summary of the April 17, 2003 telephone conversation and documented in the Applicant's response dated 3/24/03, the Examiner stated that prior art was not an issue regarding the remaining reissue claims.

The fact that no prior art is cited against claims 23 and 24 in the most recent Office Action dated 04/22/03 is evidence that the claims are already sufficiently bounded to avoid prior

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and the broadening in question is in an aspect unrelated to any prior art rejection. Thus the quoted MPEP rule applies.

Trigger Sensors Not Cited As Reason For Previous Allowance of Reissue Claims

During the telephone conversation on April 17, 2003 the Examiner specifically stated that trigger sensors were not a defining element for allowing the original patent. Therefore it is now unfair that the inclusion of trigger sensors be forced into claims 23 and 24.

Examiner's Reasons For Allowing Previous Reissue Claims

On page 5, paragraph 6a, in the Office Action dated 12/30/2002 the Examiner states his reasons for allowing reissue claims 1-22 and why the same claims avoid recapture,

"... does avoid recapture and would still be allowable over the prior art because of the controller programmed to determine the likelihood of collisions between vehicles and to actuate the "at least one" restrictor in response to prevent collisions between vehicles."

Again the Examiner did not cite trigger sensors or their usage as the determining factor in allowing the same claims (independent claims 1 and 16) that are now being used to evaluate the acceptability of claims 23 and 24.

ARGUMENT SUMMARY

Recapture is avoided because:

A broadening of reissue claims is allowed which does not demand an exact match with all of the elements of the broadest previously allowed claim. Since claims 23 and 24 are bounded by all of the elements which the Examiner cited as giving the invention patent distinction they are well within the scope of the invention described by the allowed claims. Claims 23 and 24 are further limited beyond independent claims 1 and 16 because they include the limitation of the traffic control means. Thus the claims are broader in scope in some aspects but narrower in others. The broadening does not conflict with any specific prior art objection.

The additional limitations of claims 23 and 24 by the traffic control means provides the tangible structure to the claims to describe a system that is responsive to the local traffic laws. A system that is responsive to the local traffic laws is consistent with the invention scope and present in the original application, including original claims 1c and 16c. In essence, claims 23 and 24 further define how the invention's action is **based on local traffic laws** introduced in original claims 1c and 16c. As mentioned in the Interview Summary, the Examiner said that claims 23 and 24 would be acceptable if they were shown to be a modification of the original system. For all of these reasons recapture is avoided.

Response To Examiner's Statement That Trigger Sensors Are Always Required For Determination

On page 3 of the Examiner's response dated 4/22/03 he states, "... the system cannot determine "which vehicle should be slowed or stopped without first somehow detecting a vehicle." Review of claims 23 and 24 show the fulfillment in determining the vehicle to slow or stop. Any vehicle travelling on the roadway and moving contrary to the permissive status of the

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traffic control means will encounter at least one activated vehicle restrictor and thus be slowed or stopped. Examples are Fig. 4 showing that vehicles are restricted based on the non-permissive status of the school bus stoplight / stop sign (traffic control means). Thus a collision may be avoided without the detection of the vehicle to be slowed or stopped. A second example is an intersection with alternating vehicular traffic being directed by a traffic light providing alternating green (permissive status) and red (non-permissive status) signals. The determination of a vehicle to slow or stop can simply be any such vehicle approaching the red light. In light of claims 23 and 24, that vehicle will encounter an activated vehicle restrictor and thus be slowed or stopped. Thus contrary to the Examiner's statement, claims 23 and 24 are within the invention's scope to also carry out collision avoidance without detecting a vehicle.

Modification of Independent Reissue Claims 1 and 16

As stated in the Interview Summary, the Examiner commented that the Applicant could configure or define "trigger sensor" in various ways. Independent claims 1 and 16 were both modified accordingly so that system activation is addressed by trigger sensors for vehicle parameters as well as by trigger sensors for traffic control means (as representative of local traffic laws). Review of original claim 1c and original claim 16c shows both types of triggering as part of system activation. Thus the modifications further define this original claims strategy. Please also note that modified reissue claims 1 and 16 still contain all of the elements that made the prior reissue claims 1 and 16 allowable and no new subject has been added. Claims 27-29 are added in support of the strategy in modifying reissue claim 1. Claims 30-32 are added in support of the strategy in modifying reissue claim 16.

Justification For The Reissue Claims

Following are justifications for inclusion of traffic control means for governing system response as trigger sensors. These excerpts support the changes to independent claims 1 and 16 as well as inclusion of claims 23 and 24 within the scope of the present invention.

Column 14, lines 28-34 and Fig. 4

... the actual loading / unloading operation of the bus as indicated by the deployment of the STOP sign on the side of the bus and the flashing caution lights 40a. ... thus triggering the Controller 10. At that juncture the Controller 10 will activate Vehicle Restrictors 20 in all lanes.

Column 2, lines 31-37

The most valuable system to prevent collisions will integrate and synchronize with traditional traffic control devices and systems such as using the red, green, and yellow status of the traffic light signals as input to govern system response. This capability ensures that the Collision Avoidance System reinforces the traffic laws within the environment in which it is installed.

Column 7, lines 16-20

A signal from a traffic command source (such as traffic lights, caution lights, and safety gates) integrates and synchronizes the Collision Avoidance System to the standard safety systems that the Collision Avoidance System is supporting.

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Column 12, lines 43-47 and Fig. 3

The traffic light signals (red, yellow, and green) integrate and synchronize the Collision Avoidance System to the traffic laws and safety intent of the intersection. When the cycle of the traffic light 40a first displays yellow, the system starts to deploy the Vehicle Restrictors 20a-20d.

Column 13, lines 1-6 and Fig. 3

By the time the traffic light 40a ... displays the red light the Vehicle Restrictors 20a-20d are fully deployed. To prevent an operator from prematurely moving into the intersection in anticipation of the green light, the Vehicle Restrictors 20a-20d will remain deployed until the green light is displayed.

Statement of Status of Reissue Claims

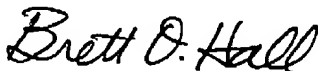
All claims, 1-32 are pending.

Submission of Original Patent

The Applicant requests the mailing address where the original patent is to be submitted.

Please direct all questions regarding this application to the Applicant as indicated below.

Respectfully Submitted,



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